

NOTES ON SOME MAMMALS FROM BASS STRAIT ISLANDS,
INCLUDING A NEW SUBSPECIES OF PSEUDOCIRUS.

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Plate xxxvi.

Many of the islands of Bass Strait are, or were, inhabited by typical native animals. With the exception of the Wombat, however (*Ph. ursinus*) which is now probably extinct, and the Rufous-bellied Wallaby (*Thylogale billardieri*), not much was known about them, nor do they appear to be represented in any Australian Museum. Settlement with the introduction of other animals, attendant bush fires, and slaughter for the fur market are rapidly depleting the fauna. Bennett's Red-necked, and the Rufous-bellied Wallabies are still hunted for their skins on Flinders and adjacent islands.

Governor Hunter obtained a Wombat from King Island in 1798, while both Bass and Flinders observed this animal in subsequent voyages. Mr. J. A. Kershaw, Curator of the National Museum, Melbourne, found two flat skins in a settler's hut on Flinders Island in 1908, and inquiries indicated that the animal was still to be found alive. My correspondents in 1928 did not mention it among the species they knew, so I presume that the last of them has gone. In 1845 the ship "Herald" procured a wallaby (*T. billardieri*) and a Phascogale from Hummock Island.

In order to have the animals that still exist on the islands identified and placed in the Australian Museum for reference purposes, I enlisted the help of Mr. Russell Holloway and Mr. R. V. Blyth to procure specimens from Flinders and West Sisters Islands; Mr. Cecil Ryan, of Pioneer, Tasmania, was kind enough to obtain and send me some marsupial mice from Clarke Island. In all eleven species were procured in 1928.

From Flinders Island were secured Water Rat, Bennett's Red-necked, and Rufous-bellied Wallabies, Dark Rat-Kangaroo, Long-eared Grey Opossum, a new subspecies of Ring-tailed Opossum, and the Hairy Echidna. From West Sisters Island Rufous-bellied Wallaby, Short-nosed Bandicoot, Yellow-footed Phascogale. From Clarke Island Little Phascogale and the White-footed Pouched Mouse. In addition another species of Rat-Kangaroo, probably *Bettongia cuniculus*, a Native Cat (*Dasyurus viverrinus*), and an Opossum Mouse (*Dromicia*) are reported as still being seen occasionally on Flinders and Barren Islands. Rats and mice are said to be common, but none have been obtained.

It is interesting to note that Bennett's and the Rufous-bellied Wallabies, Little Phascogale, and the Echidna are Tasmanian in character. The Long-eared Grey Opossum and Yellow-footed Phascogale are typical of those on the mainland. The Water Rat, Rat-Kangaroo, Bandicoot and the White-footed Pouched Mouse are common to Australia and Tasmania, while the Ring-tailed Opossum is a new subspecies of the Tasmanian *Ps. cooki*.

Bennett's Wallaby, *Wallabia ruficollis bennettii* Waterhouse.

Three specimens obtained from Flinders Island show the brownish-grey coloration typical of the Tasmania subspecies. Dimensions from filled out skins:—

Measurements (Austr. Mus., No. M.4325). (A).—Head and body, 1080; tail, 750; hind foot, 215 mm.

Measurements (Austr. Mus., No. M.4444). (B).—Head and body, 870; tail, 675; hind foot, 180 mm.

Measurements: Skull (A).—Basal length, 123; breadth, 77; nasals length, 56; nasals greatest breadth, 17; central breadth, 14; constriction, 17; palate length, 70; breadth outside m^2 , 40; inside m^2 , 23; diastema, 38; basi-eranial axis, 40.5; basi facial axis, 90.5.

Rufous-bellied Wallaby, *Thylogale billardieri* Desmarest.

Several specimens from Flinders Island are very even in characters. They agree with those from Tasmania, but have the under parts buff, and the posterior part of the ear is of similar colour. The general colour above is blackish olive grey, with a yellowish hip stripe generally present, and a cinnamon wash on the inguinal region sometimes in evidence. The upper lip may show a lighter coloration. The skull and teeth are typical of the normal form.

Two were obtained from the West Sisters Island, north east of Flinders, one of which, a large male, shows marked variation from the ordinary type. In place of the usual woolly fur on the neck and fore quarters, it has short, spinous, adpressed hair, with definite colour markings over the shoulders and back of the neck. The hair on the throat, moreover, is directed forwards, and a marked whorl is present. The second specimen shows the stiff hair on the sides of the neck and throat only, and has no special markings. On comparing the former specimen with several obtained from Tasmania by Kendal Broadbent, two males show the special characters mentioned. In one of these the hair is longer. These were apparently collected with others of both sexes, which are of the normal type. The skull and teeth of these short-haired forms do not show any marked differences from *billardieri*. It would thus seem that old males of this species show a hitherto unrecorded variation, as shown in the plate and following detailed description (Plate xxxvi.):—Hair a little coarser than normal condition, being short and spinous on the shoulders, chest, neck and throat. There is a marked ridge on the centre of the chest, from which the hair radiates forward to chin, but twisting to form a whorl on throat. General colour above dark brownish-grey, being a little darker on the dorsal region and slightly lighter on flanks. A marked slightly raised dark line runs from the crown to merge into the colour of the back, and extending round the back of the arms. Sides of the neck dark fawn (Brussels brown), and this colour is conspicuous on each side of the nuchal line. Head evenly coloured dark grey, with the exception of the line on crown. Ears same as head, margined posteriorly and basally with buff. Limbs like back, a yellow hip stripe present. Tail above evenly coloured like back, under surface covered with stiff light grey hairs. Chest and belly light buff (cartridge buff), throat cream-buff. Head and body 770, tail 450, hind foot 134, ear 49 mm. (filled out skin, No. M.4443) male.

A similar specimen from Tasmania, male No. A.5340, measures:—Head and body, 654; tail, 340; hind foot, 122 mm. (filled out skin).

Skull, No. M.4443, measurements:—Basal length, 103; breadth, 58; nasals length, 40; greatest breadth, 16; least breadth, 9; constriction, 15; palate length, 50; breadth outside m^2 , 29; inside m^2 , 20.5; diastema, 23; basi cranial, 35.5; basi facial, 68. This animal is aged.

Dark Rat-Kangaroo, *Potorous tridactylus* Kerr.

A specimen obtained from Flinders Island seems to be typical of the species occurring on the mainland and in Tasmania.

Head and body, 335; tail, 182; hind foot, 70; muzzle to eye, 47; ear, 35 mm. (filled out skin).

Ring-tailed Opossum, *Pseudochirus cooki bassianus* subsp. nov.

Two males and a female Ring-tailed Opossum from Flinders Island show a difference in coloration from the Tasmanian form of *Ps. cooki* which, though not supported by any marked cranial features, appears to warrant subspecific distinction.

General colour of back a shade of Brussels brown (Ridgway) with shining pale golden-brown hairs and longer brownish-black ones intermingled along the

centre of the back. One male has a greyish tone throughout the back, but not so marked or universal as in the typical form. Limbs and base of tail much lighter than in typical *cooki*, the limbs being cinnamon or light sahal brown above, and the tail cinnamon brown basally, as opposed to the much darker greyish to blackish brown of the Tasmanian form; the hands and feet are also of a lighter brown.

Variation.—One adult male has no trace of the normal cream-coloured fringe around the inner base of the ear present in the other specimens of both forms. The whitish ear mark is not bordered with blackish-brown above in the specimens of *bassianus* as in typical *cooki*.

The extent of the white tail-tip is very variable, in the Tasmanian specimens, ranging from $3\frac{1}{2}$ to $7\frac{1}{2}$ inches, leaving the dark part from about one-half to three-quarters of the total length of the tail; in Flinders Island specimens the white tip measures from $3\frac{1}{2}$ to $5\frac{1}{2}$ inches, the dark part being from half to two-thirds the length.

Skull.—Generally as in the typical form, a series of comparative measurements showing the dimensions of Flinders Island specimens to intergrade with the large specimen listed by Thomas and an Australian Museum specimen from Railton, Tasmania. The facial index appears to be consistent in being relatively somewhat longer in the Flinders Island form, ranging from 187.7 to 197, as opposed to 175-179.5 in the Tasmanian form.

Dimensions of the filled out skin of a male, holotype, Austr. Mus., No. M.4450:—Head and body, 355; tail, 305; hind foot, 53 mm.

Skull dimensions of allotype, female, Austr. Mus., No. M.4449:—Basal length, 58.3; greatest breadth, 35.4; nasals, length, 27; greatest breadth, 11.5; constriction breadth, 7; palatal length, 35.7; m^3 , 12 mm.

Long-eared Grey Opossum, *Trichosurus vulpecula* Kerr.

A specimen from Flinders Island represents a variation known as the "Red Brush," as distinguished from the silver-grey variety also said to exist there.

The neck, withers, and flanks are a foxy-rufous; the dorsal region is grey with a blackish wash; arms rufous, shading into grey on the paws; chest and belly with a bright yellowish wash.

This form is similar to, but rather brighter in colour than, old males from Victoria, differing materially from the Tasmanian form.

Short-nosed Bandicoot, *Isodon obesulus* Shaw.

Two skins with skulls, obtained from West Sisters Islands, do not differ materially from typical specimens from the mainland or Tasmania. Measurements:—

Filled out skins, Austr. Mus., Nos. M.4451-4452.

(A).—Head and body, 330; tail, 109; hind foot, 54 mm.

(B).—Head and body, 404; tail, 123; hind foot, 52 mm.

Skull (B).—Length, 64; breadth, 31; nasals length, 29; nasals greatest breadth, 6; intertemporal breadth, 12; palatal length, 41; breadth between outside corners, m^3 , 18; between inside corners, m^3 , 11; basi-cranial axis, 20.5; hasi-facial axis, 44 mm.

Yellow-footed Phascogale, *Phascogale flavipes flavipes* Waterhouse.

One male obtained from West Sisters Island has the hair soft, fine and adpressed; above evenly coloured brownish-grey, feet and under surface whitish. Head and body, 123; tail, 83; hind foot, 16.5; ear, 13 mm. Austr. Mus., No. M.4459.

The premolar teeth of this specimen do not show the marked disparity in size typical of the mainland form.

Little Pouched Mouse, *Phascogale minima* Geoffroy.

From Clarke Island, external characters quite typical of the species. Head and body, 124; tail, 76; hind foot, 18; ear, 12 mm. Austr. Mus., No. M.4342.

White-footed Pouched Mouse, *Sminthopsis leucopus* Gray.

One spirit specimen from Clarke Island while agreeing in colour and measurements with mainland type has the hair very long, dense and comparatively coarse. This variation is probably due to the colder climate. Head and body, 79; tail, 79; hind foot, 18; ear, 13 mm. Austr. Mus., No. M.4343.

Echidna, *Tachyglossus setosus* Geoffroy.

Four specimens from Flinders Island are the same as the Tasmanian form, except that the hair covering the body is more profuse, and the quills proportionately less visible. Second and third claw of the hind foot almost equal in length. Total length, including bill, 430; bill, 31; tip of muzzle to eye, 43.5.

Although the Tasmanian Echidna has hitherto been treated as a subspecies of the mainland form, *T. aculeatus*, its external characters are so different and so uniform that it is well worthy of specific rank. The furry covering of the mid back and the equal length of the second and third hind claw at once serve to distinguish it. Total length, including bill, 430; bill, 31; tip of muzzle to eye, 43.5 mm.

 THE LIFE OF A NATIVE BEAR (KOALA) IN CAPTIVITY.

Readers of this journal (Vol. 3, p. 112) will no doubt remember a very interesting article by Mr. A. S. Faulkner, of Albany, Western Australia, relating the history of a Native Bear, which he had had in captivity for 8½ years. "Teddy" was a female cub, about three months old, taken in August, 1914, on the Proserpine River, North Queensland. After about a month's training in the ways of civilisation, she was transported by easy stages to Geraldton, Western Australia, a distance of nearly 4,000 miles. After three years at Geraldton, she was taken to Adelaide, and six months later to Albany, Western Australia, where I had the pleasure of making her acquaintance in 1921.

Mr. Faulkner writes under date 5th August last:—"Teddy has been taken from us, and we miss her sadly, particularly my wife, who adored her little pet. She came with us from Albany to Adelaide, carefully transported, as usual, but unfortunately during a particularly bad winter she contracted a severe chill, and although we did all that was possible she died of pneumonia in September, 1926, having lived in captivity in complete contentment for twelve years. We took her down to Mr. Minchin, at the Zoological Gardens, and asked his advice as to treatment, but he could do nothing to aid, although he was very sympathetic. Before leaving Albany, I had noticed that her teeth were very long and jagged, so I filed them down a little. Further, her coat had lost its lustre, and there was every indication of age. I think the change so late in life hastened her end."

This is a very good record, and shows that the Koala can be kept in captivity even under conditions involving extensive travelling, changes of climate, and diet. There is little doubt, however, that the personal element entered largely into the successful keeping of "Teddy." In Zoological Gardens, and places where individual care and daily attention are wanting, the Koala does not thrive in captivity.

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